

*(Per ILA Approval Requirements)*



**CA Approval**  
**JB Approval**

**REGIONAL FARE COORDINATION SYSTEM  
CHANGE ORDER NO. 17 Reporting Change Order**

**CONTRACTOR:** ERG Transit Systems (USA) Inc.

**CONTRACT NUMBER:** 229944

This Change Order to Contract #229944 ("Change Order") is executed as of 2/21/06 by and between ERG Transit Systems (USA) Inc, a California corporation and wholly owned subsidiary of ERG Limited, an Australian corporation, (hereinafter referred to as the "Contractor") and each of the following seven public transportation agencies (hereinafter referred to individually as an "Agency" or collectively as the "Agencies"):

1. Central Puget Sound Regional Transit Authority ("Sound Transit")
2. King County ("King County")
3. Kitsap County Public Transportation Benefit Area ("Kitsap Transit")
4. Pierce County Public Transportation Benefit Area ("Pierce Transit")
5. Snohomish County Public Transportation Benefit Area ("Community Transit")
6. City of Everett ("Everett")
7. State of Washington, acting through the Washington State Department of Transportation, Washington State Ferries Division ("WSF")

**BACKGROUND**

- A. Effective April 29, 2003, each of the Agencies and the Contractor entered into Contract #229944 ("Contract") to implement a Regional Fare Coordination System ("RFC System") to establish a common fare system utilizing smart card technology. The Contractor is responsible for the development, implementation, operation and maintenance of the RFC System as specified in the Contract.
- B. The Agencies and the Contractor desire to execute this Change Order No. 17 to incorporate new and modified requirements regarding Back Office Data Integrations, specifically the Data Exchange, Reporting Requirements and General Computing Environment in Divisions III, section 13 of the Contract.

## TERMS

NOW, THEREFORE, in consideration of the mutual covenants contained herein, the sufficiency of which is hereby acknowledged, Contractor and Agencies agree as follows:

**Definitions.** The table below contains the definitions that may be used or referenced herein this Change Order.

**Definitions Table**

Term	Definition
Automatic revalue	A feature that adds value automatically to a product on a card at a predetermined threshold or time interval.
Data Acquisition Computer (DAC)	Collect data from on-board, portable, and stand-alone FTPs or other designated RFCS equipment for transfer to the Clearinghouse. They also provide Agencies with duplicates of the data files transferred to the Clearinghouse.
Clearinghouse	Central revenue control system.
Participant	A business organization providing a number of functional roles within the system, bound to other RFCS participants by signing an agreement with the Clearinghouse. For example, an Agency providing a fare payment service is a participant.
Pass	A card product that permits unlimited journeys by the cardholder on a specific transit operator within a specific time period.
Purse	An electronic representation of the monetary value on a smart card.
multiride product	A prepaid product that provides the cardholder with the right to travel for a specific number of journeys within a defined number of days from date of purchase after which time the tickets shall not be accepted for passage.. For example, a ten-ride product, which offers the cardholder ten journeys valid for 90-days from date of purchase after which time the tickets shall not be accepted for passage. See <i>also</i> purse and period pass.  A multiride product holds electronic value in ride units. A cardholder purchases a multiride product and receives a fixed number of rides on the multiride product on the card, and if applicable, must be used within a limited number of days.  The cardholder can subsequently use rides on the multiride product to pay for transit services from Service Providers that honor the multiride product.

## AGREEMENTS

The Agencies and the Contractor hereby agree to the following changes to the Contract.

- 1.0 Division I and II:** The Agencies and the Contractor agree that no changes are requested to Division I or II of the Contract pursuant this Change Order.
- 2.0 Division III Changes:** Contract Section(s) 6.III -13. Back Office Integration is amended as follows:

**2.1 Contract Section 6.III-13.3** Data Exchange and Reporting Requirements is amended as follows:

### **6. III-13.3 Data Exchange and Reporting Requirements**

- (a) The RFCS shall provide the following minimum data exchange and reporting between the clearinghouse and each Agency's existing revenue and ridership systems:
  - i. Standard System Performance
  - ii. Standard Ridership and Revenue
  - iii. Ad-hoc Ridership and Revenue
- (b) All reports shall be generated using a query language and standard query engine (to be approved by the Contract Administrator) that provides flexibility for future updates, and for creation of new reports.
- (c) Report writer software shall include the ability to generate graphs and charts based on criteria and format defined by the user.
- (d) Where applicable, reports shall be designed to generate with variable data and time parameters allowing dynamic user selectable criteria such as start/end dates and data content. Report generation may be restricted by processing rules when necessary to minimize impacts on system processing resources (such as preventing full database passes).

#### **13.3.1 Standard System Performance Reporting**

Where applicable, the RFCS shall generate the following standard system reports automatically on an agreed schedule defined for each report. When required, and respective of system processing rules, the report(s) may also be run on demand. Report generation may be restricted by processing rules when necessary to minimize impacts on system processing resources (such as preventing full database passes)

- (a) Financial management reports, including as a minimum:
  - i. Daily Sales by Participant
  - ii. Daily Sales by Payment Type
  - iii. Exception Items
  - iv. Missing Add Value Transactions
  - v. Net Settlement Position for all program participants
  - vi. Daily Settlement Position reports including:
    - (1) Settlement account and bank account identifiers
    - (2) Purse transactions summarized by sales, fare payments, transfer adjustments, refunds, and escheatment value transfers
    - (3) Sales transactions summarized by purse sales, sales of own products, sales of other Participant products

(4) Other transactions summarized, including but not limited to (based on Participant), manual adjustments, apportionment values, expired transaction value, transfers from Institutional or Lead Agency accounts

- vii. Transaction summary information based on the Clearinghouse settlement date for each Agency, centralized role, or retailer.
- viii. Transaction summary information showing when transactions were processed through settlement, by the Agency's reconciliation date.
- ix. Claim transactions for all system participants
- x. Manual adjustments
- xi. Total liability owned by the Agencies for Purse Values
- xii. Provide details of all inactive cards to support both internal and Washington state escheatment processes.
- xiii. Automatic revalue transaction information, including product type, volume and value, reflecting the date the fare card was updated with the value.
- xiv. Revenue from sales of regional passes apportioned across Agencies. Data will be subject to appropriate system business rules that govern calculation and allocation of regional pass revenue.
- xv. Revenue from Purse Transfers distributed and adjusted for all Agencies. Data will be subject to appropriate system business rules that govern calculation and allocation/re-allocation of purse transfer revenue.
- xvi. Revenue from sales of regional passes within Institutional programs apportioned across Agencies participating in the program. Data will be subject to appropriate system business rules that govern calculation and allocation of regional pass revenue.
- xvii. Instances of NSF transactions results from a bad check or post payment automatic revalue.
- xviii. Successfully processed card refunds.

(b) General management information reports, including as a minimum:

- i. System utilization reports.
- ii. Fare card reliability statistics, measuring the rate of failures.
- iii. Device reliability for all device types in the program. This should exclude failures such as power outages, accidents or mishandlings.
- iv. Device status and availability, including historical data.

(c) Contractor provided customer service reports, including as a minimum:

- i. Call center level of service and performance against quality standards

(d) Website performance data including statistics on the use and uptake of all areas of the RFCS website pages.

- i. Summary of activity by hour, day, and month

- ii. Activity by web page, including number total number of hits, hits by entry pages, and hits by exit pages.

(e) Institutional program reports, provided to both the Agencies and institutions, including as a minimum:

- i. Institutional program participation based on RFCS fare media usage on a RFCS card.
- ii. Institutional program ridership statistic summaries, showing the cash equivalent value and the value actually received by the Agency providing the transit service.
- iii. Institutional program ridership statistics by Agency providing the transit service, the route, and other fare payment transaction detail.
- iv. Transaction history for Institutional cards (monthly or for specified date range).
- v. Billing data including summaries of redeemed/unredeemed vouchers and customized programs.
- vi. Institutional program data to show the number of cards issued in an Institutional program, the products on the cards and whether the products and cards are being actively used or not.
- vii. Details of products that an Institution has ordered, but were never redeemed during the billing or agreement period.
- viii. Details of vouchers that an Institution has ordered, but that were never redeemed during a specified period.
- ix. Vanpool use by Institution, Vanpool ID, Agency, and/or card serial number, accessible by the vanpool administrator at each Agency.
- x. Details of vanpool subsidies used on vanpool services, accessible by the vanpool administrator at each Agency.

(f) Card management reports, including as a minimum:

- i. Detailed list of all smart cards by RFCS location, type and card status, throughout the asset management lifecycle
- ii. Details of all Agency orders in the RFCS
- iii. Delivery performance
- iv. Bad stock, returns, and defects

(g) System maintenance reports (DR 110.09), including as a minimum:

- i. System-wide inventory report
- ii. Device faults and support services statistics
- iii. Device warranty periods (including current and extended periods)
- iv. Status of all device support reports managed by the Contractor repair center, by Agency (location and owner), and device type
- v. Details of devices (non-spare) that did not connect to a DAC during the reporting period

- vi. Provide audit data to assist in confirmation that transactions are sent from devices, received, and processed by the Clearinghouse

### **13.3.2 Standard Fare Card Ridership and Revenue Reporting**

#### **13.3.2.1 National Transit Database Reporting (DR 110.10)**

- (a) The RFCS shall generate data extracts of unlinked passenger trips for each Agency to use to prepare their NTD reports. The extracts shall include:
  - i. Annual unlinked passenger trip totals.
  - ii. Average weekday, Saturday and Sunday unlinked passenger trip totals.
  - iii. Unlinked passenger trips by mode including motor bus, trolley bus, vanpool, rail, and demand responsive services.
- (b) The RFCS shall generate data extracts with passenger fare information for each Agency to use to prepare their NTD reports. The extracts shall include:
  - i. Total passenger fares.
  - ii. Fares by fare category, including as a minimum full-fare (adult), senior citizen, student, special fares.
  - iii. Fares by mode, including as a minimum motor bus, trolley bus, vanpool, rail, and demand responsive services.

#### **13.3.2.2 Common Ridership and Revenue Reporting (DR 110.11)**

The RFCS shall generate the following ridership and revenue reports for each Agency.

- (a) Ridership reports containing information as listed below. The reports will run daily, monthly, and by user-specified date range:
  - i. Route
  - ii. Agency or contractor owning coach
  - iii. Service or agency operated under
  - iv. Transit Operator (where applicable)
  - v. Fare category (per the fare categories of each respective Agency), and exceptions or upgrades
  - vi. Fare payment type and value of payment
  - vii. Average weekday ridership (monthly report only)
  - viii. Average Saturday ridership (monthly report only)
  - ix. Average Sunday ridership (monthly report only)
  - x. Average Holiday ridership (monthly report only)
  - xi. Unlinked trips (boardings)

- xii. Intrasytem transfers for a standard reporting period (e.g. Monthly) and available on-demand for a user-selected period. The report should also be available on-demand at the Route level if specified
- xiii. Intersystem transfers for a standard reporting period (e.g. Monthly) and available on-demand for a user-selected period. The report should also be available on-demand at the Route level if specified

(b) Monthly status of the number of fare cards issued in the reporting period. Provide a breakdown of the revenue earned by Agency by:

- i. The value of the products added to those cards by product type in the reporting period
- ii. The number of fare cards used in the period and the revenue earned by Agency, by product.

(c) Pass/Multi-Ride Product sale/revalue summaries, broken down by:

- i. Sale/revalue location identification.
- ii. Product (type and face value).
- iii. Revalue amount.
- iv. Subsidy amount and type.

(d) Fare underpayment report to identify those transactions in which additional cash fare was required (not whether it was paid), including the following information:

- i. Card serial number
- ii. Product (type and face value)
- iii. Route identification.
- iv. Expected amount
- v. Amount of underpayment.
- vi. Route owner or transit operator

(e) Counts from regional counters for non fare card usage

### 13.3.3 Ad-Hoc Fare Card Ridership and Revenue Reporting

Through the back office client application, the RFCS shall provide each Agency with the ability to prepare ad-hoc reports (DR 110.12) using business views created either directly against data generated by RFCS devices or derived from data supplied by the Agencies and imported into the RFCS. The reporting ability should include at a minimum:

(a) Transaction-level reports for user-defined start and end dates, including at a minimum the following fields or subset thereof defined by the user. The data available will be constrained according to the relevant system business rules regarding transaction validity, availability, and governing revenue determination and allocation:

- i. Card Number or Identifier
- ii. Institutional ID

- iii. Vehicle ID
- iv. Route ID
- v. Run ID (bus and rail)
- vi. Trip ID (bus and rail)
- vii. Device ID
- viii. Vehicle owner, route owner, or transit operator
- ix. Date of transaction
- x. Time of transaction
- xi. Amount or value of transaction and product type
- xii. Valid fare payment, upgrade or underpayment
- xiii. Linked trips, unlinked trips, purse transfers, and ridership transfers
- xiv. Agency transferring from (if applicable)
- xv. Route transferring from (if applicable)
- xvi. Run transferring from (if applicable)

(b) Statistical and research reports using user-defined criteria. Examples include:

- i. Usage characteristics for user-defined customer market segments, potentially broken down by type of fare payment used (cash, purse, pass, multiride etc.), route, period of travel, and/or frequency of travel.
- ii. Product type used versus cash equivalent full fare value
- iii. Card revalues by revalue location.

(c) Functionality for generating reports on a regional basis, including linked trips, unlinked trips, and transfers for any combination of Agencies in the region. Provisions shall be included to limit user access to Agency-specific data per permissions and policies of each individual Agency.

(d) Financial management reports using user-defined criteria. Examples include:

- i. Card account activity
- ii. Financial trend analysis

(e) Fraud management report using user-defined criteria. Examples include:

- i. Transactions by specific card(s)
- ii. Transactions on lost, stolen, damaged, or replaced cards
- iii. Transactions occurring at any location outside of specified business hours
- iv. Transactions by device or CST operator

(f) Boardings and revenue associated with ridership transfers, purse transfers, and linked trips between Sound Transit and local Agencies (Community Transit, Everett Transit, King County Metro, and Pierce Transit) on a daily, weekly, monthly, and year-to-date

basis. The information provided will be constrained by system business rules governing revenue calculation and allocations.

- i. Total value of purse transfers and linked trips between Sound Transit and each local agency classified by each type of product, full payment by purse, and payment by product and purse indicating product classification used and amount of purse upgrade
- ii. Allocation and disbursement of actual revenue collected between Sound Transit and each local agency

(g) Boardings and revenue associated with linked trips and purse transfers between local agencies (Community Transit, Everett Transit, King County Metro, and Pierce Transit), based on the system business rules governing revenue calculation and allocation.

- i. Total value of linked trip and purse transfers between local agencies classified by each type of product, full payment by purse, and payment by product and purse indicating product classification used and amount of purse upgrade
- ii. Allocation and disbursement of actual revenue collected between local agencies

#### **13.3.3.1 Agency Specific Fare Card Ridership and Revenue Reporting**

In addition to the standard and ad-hoc reports, the Contractor shall provide data extracts of transaction summary data from the BOC and transaction data from the Clearinghouse to support the ability for Agencies to create Agency specific reports on an ad hoc basis. (DR 110.13). Sample report formats are contained in Appendix B. Except where noted, the Contractor may provide alternative report formats, subject to approval by the affected Agencies.

The ad hoc reports will be created either directly against data generated by RFCS devices or derived from data supplied by the Agencies and imported into the RFCS. The data may be available at the Clearinghouse or at the Back Office Computer.

(a) King County Metro

The Contractor shall provide the ability to create ad hoc reports to support the following KCM needs (samples of King County reports are provided in Appendix B-2).

- i. Purse, pass, multiride revenue associated with passenger trips
- ii. Number of passes in use
- iii. Monthly and year-to-date totals for all fare card product transactions by fare category type
- iv. Monthly passenger trip counts for all product transactions broken down by day of month and day of week, showing the total number of rides per day for each category of transaction
- v. Daily total for all fare card product transactions to illustrate the outstanding fare media in use and sold for the month

(b) Kitsap Transit

The Contractor shall provide the ability to create ad hoc reports to support the following Kitsap Transit needs (samples of Kitsap Transit reports are provided in Appendix B-3):

- i. Driver shift report listing rider head count over the span of the shift.
- ii. Ridership counts broken down by weekdays, Saturdays, or Sundays
- iii. Number of riders by route location and total passengers for the location for the specified timeframe

(c) Pierce Transit

The Contractor shall provide the ability to create ad hoc reports to support the following Pierce Transit needs (samples of Pierce Transit reports are provided in Appendix B-4):

- i. Revenue and ridership reporting compatible with the Average Daily Ridership report described in Appendix B-4. The first two (2) pages of E-4 contain a sample report that shows how Pierce Transit breaks up bus fleets and route categories. This is provided for illustrative purposes, but does not include the full range of fields that will be required for RFCS implementation.

The Contractor may fulfill this functional requirement by providing revised documentation that describes Back-Office Client export instructions, and Excel import instructions, or may provide an alternative method (subject to Agency approval) that fulfills the reporting requirements.

- ii. Wheelchair lift utilization by fleet type (boardings only)
- iii. Bicycle boardings by route and fleet type
- iv. Average and Peak Reports

Peak ridership is the average (over multiple days) of the maximum number of passenger boardings in a specified time period.

- (1) Average Weekday Ridership
- (2) Average Saturday Ridership
- (3) Average Sunday Ridership
- (4) Seattle Express Northbound Peak
- (5) Seattle Express Southbound Peak

Examples of these charts have been provided in Appendix B-4.

- v. Average and total passenger boardings by trip number and route. This may be included as part of the Common Ridership and Revenue Reports described in 13.3.2.2.
- vi. Monthly reporting by revenue categories, totals by product, and totals by fare type. The data available will be governed by the system business rules regarding revenue allocation and distribution. The RFCS may cause some product types to be obsolete, and may add new types to the report. An example is contained in Appendix B-4.

- vii. Daily sales counts of products by sales outlet. The example report is an excellent resource for product types that the system shall support for integration with Pierce Transit.

(d) Community Transit

The Contractor shall provide the ability to create ad hoc reports to support the following Community Transit needs (samples of Community Transit reports are provided in Appendix B-1):

- i. Number of passenger boardings by route and performance center for weekdays, Saturdays, and Sundays.
- ii. Payment type (cash, purse, period pass, transfer, etc.) and amount. By route and performance center for weekdays, Saturdays, and Sundays.
- iii. Product type by route and performance center for weekdays, Saturdays, and Sundays.
- iv. Fare category (senior, youth, disabled) by route and performance center for weekdays, Saturdays, and Sundays.
- v. Number of transfers to/from other RFCS transit systems and the associated routes.
- vi. Number of intrasystem transfers at the route and performance center level
- vii. Provider Reports:

This category is required for CT to support their existing business practice of multiple service contracts. The Contractor shall provide the ability to generate ad hoc reports for quarterly ridership and revenue summary reports for each contracted transit operator. The availability of revenue data is governed by the system business rules used to calculate and allocate revenue.

- (1) Sales by retail location, including the total of each category of item sold
- (2) Sales by performance center
- (3) Sales by retailer
- (4) Summary of cash receipts by category that reconciles with the daily total cash receipts

(e) Everett Transit

- i. The Contractor shall provide adhoc reporting capability for the preparation of Everett Transit reports.

(f) Sound Transit

The Contractor shall provide data exchange for the preparation of reports by Sound Transit's CDCS per the data requirements contained in Appendix B-5. Additional data exchange and financial reporting requirements for Sound Transit, beyond the standard

reports, is currently under review.

- (g) Washington State Ferries

The Contractor shall provide adhoc reporting capability for the preparation of WSF reports with content as listed under 6.III-13.3.3.1 (a) (King County Metro).

#### **13.3.4 Non-Fare Card Transaction Reporting (DR 110.14)**

- (a) At the direction of each Agency, the reports listed in Sections 13.3.2, 13.3.3 and 13.3.4 shall include and consolidate non-fare card data collected through the fare transaction processor and data acquisition system.
- (b) Non-fare card data shall be listed as one or more additional fare types. As a minimum, a “cash” fare type shall be included.

### **2.2 Section 6.III-13.4 General Computing Environment is amended as follows:**

The intent of this section is to illustrate general industry guidelines and Agency preferences for hardware and operating system software. It is also the intent of this section to include, and not limit this application to, a multitude of application technology solution types for the Agency Back-office Integration.

- (a) The Contractor shall provide a back-office solution that is compatible with the computing environment of each Agency.
- (b) The Contractor shall provide the exact specifications for new systems to be integrated with legacy systems to the Agencies and their designates, including other Contractors responsible for legacy systems.
- (c) The Contractor shall provide a means for users to manage processes or sub-processes (threads) of the client application. This requirement may be fulfilled by using native operating system utilities to monitor, pause, or terminate lengthy processes as needed.

#### **13.4.1 Back-Office Client Application Computer**

- (a) The Back Office Client Application Computer shall meet minimum standards as listed in Section 6.III-12.4.1, and shall be approved by the Contract Administrator (DR 110.15):
- (b) Data back-up and redundancy shall be provided to protect against data loss.

### **2.3 Section 6.III-13.5 Performance Requirements is amended as follows:**

### **13.5.1 Back-Office Client Computer**

- (a) Upon database query, print, or any other application function, the application shall return control to the user within five (5) seconds of initiation.
- (b) All transactions shall be successfully processed.

### **13.5.2 Data Transfer and Report Generation Response Time**

- (a) Fare Table Updates: Fare table transfer to the clearinghouse system shall be completed in less than ten (10) seconds.
- (b) Standard Reports: Existing instances of standard reports shall be generated in less than ten (10) seconds (this does not include the printer time to complete the output). On-demand generation of standard reports will vary based on the complexity of the data set and selected parameters.

"Complete" is defined as - "Full control of the workstation has returned to the user". Background processing strategies may be implemented to fulfill response time requirements.

### **13.5.3 Reliability and Accuracy**

- (a) Reporting process: All reports shall perform the correct calculations for sub-totals, totals, and summary information (all derived information) with 100% accuracy. The underlying standard report design (including mathematical formulas) shall be available to the Agencies for review.
- (b) Fare table updates: The Back-Office Client shall correctly transfer the Fare Table revisions to the clearinghouse system with 100% accuracy.
- (c) Transaction recording functions: The Back-Office Client shall correctly store information into the clearinghouse database with the appropriate field and form level validation.

## **3.0 Other Terms and Conditions**

Except as expressly amended by this Change Order, the Contract remains in full force and effect. All other provisions of the Contract not referenced in this Change Order No. 17 shall remain in effect unless modified in other executed Amendments and Change Orders.

IN WITNESS WHEREOF, the parties hereto have executed this Change Order No. 17 to Contract #229944 as of the date set forth below its signature.

**ERG Transit Systems (USA) Inc.**

By: Patrick Branen  
Its: PROJECT MANAGER  
Date: 21 - FEB - 06

**The Agencies**

By: Constance Carlson  
Their: Contract Administrator  
On behalf of the Agencies  
Date: Feb. 21, 2006

**Central Puget Sound Regional Transit Authority**

By: \_\_\_\_\_  
Its: \_\_\_\_\_  
Date: \_\_\_\_\_

**City of Everett**

By: \_\_\_\_\_  
Ray Stephanson, Mayor, or His Designee  
Date: \_\_\_\_\_

**King County**

By: \_\_\_\_\_  
Its: \_\_\_\_\_  
Date: \_\_\_\_\_

**ATTEST:**

By: \_\_\_\_\_  
Sharon Marks, City Clerk  
Date: \_\_\_\_\_

**Pierce County Public Transportation Benefit Area**

By: \_\_\_\_\_  
Its: \_\_\_\_\_  
Date: \_\_\_\_\_

**APPROVED AS TO FORM:**

By: \_\_\_\_\_  
Peter Camp, City Attorney  
Date: \_\_\_\_\_

**Washington State Ferries, Washington State Department of Transportation**

By: \_\_\_\_\_  
Its: \_\_\_\_\_  
Date: \_\_\_\_\_

**Kitsap County Public Transportation Benefit Area**

By: \_\_\_\_\_  
Its: \_\_\_\_\_  
Date: \_\_\_\_\_

**Snohomish County Public Transportation Benefit Area**

By: \_\_\_\_\_  
Its: \_\_\_\_\_  
Date: \_\_\_\_\_